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DOG DAYS.

BY FRANCIS J. A. MORRIS, PETERBOROUGH, ONT.

Almanacs heliacal and cosmic notwithstanding, sunworshippers in Canada during the first fortnight of July, 1916, could hardly question the ascendancy of Sirius. The heat was so intense here, in Central Ontario, that tropical thunderstorms burst over the land every few days without ever lowering the mercury longer than a matter of hours. For certain forms of insect activity (we may safely say) it cannot be too hot, and at such times, if your observer is a real enthusiast, he will be more than busy. For my part I was enjoying the rest and leisure of summer holidays by hurrying at red-hot speed—a slow walk sufficed—to a succession of stations at four diverse radial points from the city of Peterborough, six miles east to the Wood of Desire, eight miles south to the neighborhood of Hiawatha, two miles west beyond Jackson's Park, and five miles north between Nassau and Lakefield. At the western station I was burrowing into the heart of a woodpile with results that have already been put on record. I wish here to say something of a trip I took towards Hiawatha.

On July 5th I boarded the early morning train to Keene, my object being to make a general reconnaissance of the country lying between Indian and Otonabee Rivers just north of Rice Lake; a solitary tramp one April, when wild geese were wedging north, had revealed some likely looking woods, and their promise had been confirmed by a motor ride to Hiawatha and a river trip to Jubilee Point. I started out determined not to show any more bias or discrimination than a man who is "sot" in his few peculiar ways can help, and that was why I carried field glasses and a pocket plant-press as well as insect net and collecting bottle.

On leaving Keene station, after a few uncertain questings like a hound at fault, I finally headed west, nose to the ground, and swung south at the second cross-road, in full cry for a compact-looking bush of hardwood and hemlock. Presently I came to where dense cedar aisles flanked the road on both sides. Experience had taught me to look in such places for some of the smaller *Botrychiums* (ferns), and I dived into the depths. As soon as I had had time to collect myself and look about, like some Indian pearl-gatherer, I found myself staring at a large clump of Macrae's Coral-root (*Corallorhiza striata*), still in bloom though 3 weeks later than usual; quite near it were some small plants of *Botrychium simplex*, while further on I found a few fairly large specimens of *Botrychium matricariæ* (*ramosum*). All this on the west side of the road; on the east this rare Coral-root was abundant, especially some feet down a steep bank on the outskirts of the wood I had been making for. It seems to have a decided preference for sheltered roadsides and the edges of woods, especially under evergreens; though one station at least that I know of is under hardwoods. The plant, usually known as Striped Coralroot, is a western species, and in Ontario is reputed quite as rare as, say, the Evening Grosbeak among birds; in the neighborhood of Peterborough, however, it is of fairly general occurrence,

and I have found about a score of colonies; it is in fact "locally rare," but we happen here to be a favoured district for the plant, as we are for the bird.

Once down the bank I found the adjoining wood so inviting that I stepped in and spent a couple of the morning hours wandering about in the shadows of its cloistered beech and maple. A footpath traversed the wood N. E. to a clearing partly filled with woodpiles, and close by the path I happened on several colonies of *Corallorhiza multiflora* just coming into bloom, and yet another "sicht for sair een" in the shape of *Habenaria hookeri*. For this plant I had only known a single station heretofore, a few miles north of Port Hope, and in recent years the colony had dwindled to 1 or 2 plants in a season. Here by Hiawatha I counted close on a score of plants; it is nowhere nearly so common an orchid as its next-of-kin *Habenaria orbiculata*.

From the shadows I emerged about 11 a.m. into the glare of the clearing and made a fairly thorough scrutiny of the woodpiles; there were no traces of longicorns about them, but buprestids (mostly *Dicerca divaricata*) in great numbers and astonishingly active in the fierce heat; almost as ready to take to flight on being approached as to play dead, an unusual condition for the species; two kinds of *Agrilus*, also, were to be seen about the piles and numbers of *Chrysobothris femorata*; however, these insects had all become common to me and I was free to pass on to further explorations. I could not but admire, however, the wonderful protective colouring which enabled these large, heavily built *Dicercas* to shuffle about over the grey bark of beech or maple almost unobserved and immune from attack; on a single small woodpile I counted upwards of 40 of these insects basking, crawling, or settling on the billets, and I brought 11 home to mark the occasion. My parting thought was how lucky I should have thought myself a few years before, as a young collector, to meet so fair a fortune face to face right on the threshold of the woods and a July holiday.

Next I made my way to a small grove of pines on a knoll beyond a soggy pasture; here were some bushes of sweetbriar and a patch of gowans from whose blossoms I gathered a few *Lepturas*, *pubera* and *proxima*, *Clyanthus ruricola* and *Typocerus lugubris*—an old friend now met again for the first time since leaving Port Hope.

I then crossed to the S. W. of the meadow, approaching the road along the edge of a wooded swamp. Right in the sun stood a large hemlock, its bark glowing red in the light, and immediately in front of it were some logs of hemlock lying; on one of the logs I spied an uncommon *Dicerca* with somewhat short-pronged elytra tips, noticeably stout across the back and remarkably rugose, the ridges dark grey, but the grooves and channels brilliant with a mixture of silver and rich green as of verdeggris. Hardly had I captured the prize when a facsimile suddenly lit on the standing hemlock; but alas! as I approached over the rough, swampy ground, the insect flew and soaring in an upward plane was soon swallowed in space. Have you ever fed your spleen at the expense of some poor lumbering spaniel trying by a sudden dash to surprise a flock of sparrows feeding by the barn—for ever foiled, but never losing hope? I have, and smiled cynically at its comic look of dejection; but when cynic and hound are both in one skin, look you, the cream is off the joke. My capture has been identified as *Dicerca tenebrosa*, one of the most pleasing to look

at of all its genus and quite rare,—this being only the third specimen ever taken by me.

Just south of where I made these captures ran a good gravel road east and west; I struck west and after two miles entered a wayside smithy for directions; here they told me that the next cross-road would take me south to Hiawatha and north to the flag station of Drummond's. Both here at the blacksmith's and further on at a farm where I called for a drink of water, I was conscious of being eyed with suspicious looks, but since August, 1914, I had been taken for so many aliens that I gave the matter hardly a moment's thought.

To my delight I recognized at the next corner a piece of country near the Otonabee through which I had once motored, and I knew there was a fine stretch of woodland just S. W. of the cross-roads. It is always a great relief to swing out of the dusty highway with its cramped fence margins into the spaciousness of pasture and woodland.

The wood was too dense at this point for floral treasures, and proved after all a very narrow belt with the river in full view just beyond some stumplands. Just north-west the axe had been recently at work levelling part of a farmer's woodlot; there were stacks of cordwood visible, and a recent storm had taken heavy toll of timber on the newly exposed western edge. In the mid distance I spied a fallen spruce and a large limb of beech torn from its trunk. The day was at its height and no tiniest breath of wind invaded the throbbing heat. If ever there were insects abroad here in the day-time, it would be now.

My first venture was the fallen spruce, but nothing was to be seen about its rough, scaly bark, or among the branches and foliage. In falling, however, it had struck and heavily "blazed" a nearby balsam fir; this tree was languishing, for the foliage had gone brown. On examining the tree closely, I found just beside the grazed patch of bark (which was oozing resin freely) a fine specimen—a large female—of *Xylotrechus undulatus* ovipositing, and then, somewhat lower, a male of the same species; these beetles I had seldom taken before, and had indeed been uncertain as to which of our conifers it attacked. But I was able to make good use of my discovery, and secured later in the season over a score of the insects in the Algonquin Park. The other tree infested by it is the hemlock, and very rarely I have captured a specimen on spruce. Both these beetles were on the sunny side of the tree, and when I worked round to the shady side no more of their kind were to be seen; but I soon detected—courting the shadow as usual—a pair of *Acanthocinus obsoletus*; this was of some interest, for I had never before taken the species on any tree but white pine, where it is fairly frequent. Examination of several other balsams brought no fresh captures and I determined to move on towards the S. W., where fire had run between the belt of woodland and the river.

A path took me right past the broken limb of beech, part of which lay along the ground. Beech had never before brought me any captures of longicorns, and I was passing on with only a casual glance when I was stopped short by a discovery that proved the forerunner of many interesting captures during the dog-days of 1916. It was a small specimen of *Neoclytus erythrocephalus* that I spied running along one of the branches of the fallen limb. I suppose this insect is fairly common, a few specimens were once sent me from near the Rideau by an old friend who had noticed them racing over some fresh-cut

logs and branches of maple; about 4 years ago I captured 3 or 4 on some newly-lopped branches of hawthorn. But they are quite a difficult insect to capture; in my experience they are even more active than *Neoclytus muricatus*, a black species with white or grey pubescence, occurring on white pine. So far as I have been able to observe (by a comparison of these two species of *Neoclytus* with *Xylotrechus undulatus* and *colonus*), the former have a far better title to the name *Xylotrechus* than the latter, which are much more sedate and leisurely in their movements; both species of *Neoclytus* are expert and habitual "log-runners," as the word *Xylotrechus* implies; they have extremely long hind legs and travel at a great rate, zig-zag or spiral, even leaping or dropping from one branch to another, by long odds one of the nimblest of our longicorns; in hot sun, they are quite as active on the wing as in running and dodging. Indeed, they are seldom at rest, except momentarily when breeding, or while ovipositing in shadow on the under side of the limbs and branches. In about half an hour I had captured 3 specimens and lost 2 more; I found that they soon returned, after escape by dropping or flight, to the log or limb of their choice. Besides these, on the broken trunk and upper part of the torn limb I captured an *Agrilus* that was new to me, 5 or 6 specimens,—*Agrilus obsoletoguttatus*.

About a quarter of a mile farther on I came across an old hollowed beech, which the same storm had broken off near the root; the tree had been partly dead before its fall and appeared to be even more attractive than the sounder wood of the torn limb. I captured 5 *Neoclytus erythrocephalus*, including a breeding pair which I detected perfectly motionless on the under side of a small branch; several more *Agrilus obsoletoguttatus* and 2 *Agrilus bilineatus*. These were all captured from above or the sides, on the branches and limbs; before leaving I stooped to look at the under side of the trunk which was a couple of feet up from the ground and parallel with it. I immediately became aware of a grey longicorn—indeed a pair—and by lying down under the tree I was enabled to make captures at several points on the lower surface; 4 *Urographis fasciatus*, 1 *Hoplosia nubila* and 1 *Neoclytus colonus*; none of my readers, if interested in *Cerambycidae*, will deny that this was reward enough for a certain discomfort of body; but, I have, sometimes, since, in atrabilious humour, pictured myself a middle-aged plumber of palpably inattenuate bulk, engaged in driving rivets up into the under side of many-jointed boilers and squat kitchen stoves.

On my way back to the road, I captured on raspberry foliage a specimen of *Oberea* having the thorax entirely light creamy brown, the body, legs, wings, and scutellum being black. This was the last of my captures that day, but the observations led eventually to quite a series of finds and really opened a fresh field of investigation for my tramps abroad.

The heat lasted on, and I managed a few days later to make a trip to the east section of the Wood of Desire, where beech trees are numerous; I figured on the storm which had taken toll so heavily near Hiawatha, having swept the west or windward side of that wood, and sure enough, I found nearly a dozen beeches down. On four of them, longicorns were busy; and on two that had come down together with roots intertwined, I captured 8 specimens of *Xylotrechus colonus* and 34 of *Urographis fasciatus*. Only trees in full sunshine seemed to be attractive, and the weather was unusually hot. I have examined beech assiduously all through July since 1916, and though I have made an

occasional capture, I have never taken insects in any great abundance. My experience has been very similar in the case of basswood, white pine, poplar, balsam and spruce; an occasional haul, but usually little or nothing; and even less on the harder wood of elm, maple, ash, butternut, hickory and oak. Theories are dangerous, but I incline to think that some sense of smell—probably sap or vegetable juices fermenting in the hot sun—releases the reproductive impulse in these woodborers and brings them in ever-growing numbers from all parts of a wood to the few windfalls that their instinct “senses” as the proper nursery of their race.

It was in piecing out such problems as these in the late afternoon of July 5th, 1916, in ruminating over the day's take, and in planning my next campaign, that I beguiled my way along the last few miles of this 12-hour jaunt. On arriving home I found that the weather man had recorded 98 degrees Fahr. in the shade, and when I caught sight of myself in the bathroom mirror I realized why I had been the object of so many suspicious looks. My face was tanned to the colour of a well-boiled lobster and smeared with muddy streaks that had once been summer dust; my tie had disappeared and my collar wilted to the form and semblance of a dirty handkerchief; the philosopher's dignity was further impaired by the revelation of a large, 3-cornered rent in one trouser leg. I was really lucky to have made my way home through more than a mile of populous city streets unarrested, if not unrecognized.

NATIONAL COLLECTION OF INSECTS.

Dr. J. McDunnough has been appointed Assistant Entomologist, in the Entomological Branch, Department of Agriculture, Ottawa, to have charge of the National Collection of Insects. Canadian Entomologists will welcome the return of Dr. McDunnough to his native country, and his appointment to a position in which he will be able to devote his extensive knowledge of systematic entomology to the care and building up of the National Collection.

AN ENTOMOLOGIST'S HANDBOOK.

An entomologist's handbook or compendium is very much needed, especially by economic entomologists. It is planned to compile such a handbook, which will include principles and methods of studying the life histories of insects, of conducting field experiments and demonstrations, handy tables for field workers, etc. It is desired to have references, or better, to have separates of all published notes dealing directly or indirectly with the subject and to have details, and if possible drawings or photographs as well, of cages, apparatus, methods, etc., as yet unpublished. The handbook will be a compilation and full credit given to all contributions.

The co-operation of entomologists is solicited.

JOHN J. DAVIS,
Box 95, West Lafayette, Indiana.